WHAT IS CLAIMED IS:

1. A method of generating a graphical bar code, comprising:

applying an invertible graphical operation between regions of a base image and information-encoding graphical templates selected from a predefined template set to produce a graphical bar code with regions from which graphical templates are recoverable by applying an inverse graphical operation between graphical bar code regions and corresponding base image regions.

2. The method of claim 1, wherein the invertible graphical operation corresponds to an exclusive OR (XOR) operation.

3. The method of claim 2, further comprising applying XOR operations between the graphical bar code regions and corresponding base image regions to produce the graphical templates.

4. The method of claim 1, wherein each of the base image regions and the graphical templates has the same number of pixels.

5. The method of claim 4, wherein each of the base image regions and the graphical templates has a common pixel layout.

6. The method of claim 5, wherein the common pixel layout corresponds to a rectangular pixel array.

7. The method of claim 1, wherein each graphical template comprises a pattern of bright and dark pixels.

8. The method of claim 7, wherein the number of bright pixels is greater than the number of dark pixels.

9. The method of claim 7, wherein each pixel location within the predefined template set has an equal probability of being a dark pixel.

10. The method of claim 1, wherein the graphical templates are ordered adaptively in accordance with one or more predefined rules relating to disfavored graphical template sequences.

11. A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:

apply an invertible graphical operation between regions of a base image and information-encoding graphical templates selected from a predefined template set to produce a graphical bar code with regions from which graphical templates are recoverable by applying an inverse graphical operation between graphical bar code regions and corresponding base image regions.

12. A method of decoding a graphical bar code, comprising:

applying an invertible graphical operation between regions of a graphical bar code and corresponding regions of a base image to produce a set of measurement blocks; and

selecting from a predefined template set information-encoding graphical templates corresponding to the set of measurement blocks with the highest estimated probability.

13. The method of claim 12, wherein the invertible graphical operation corresponds to an XOR operation.

14. The method of claim 12, further comprising computing pixel value probabilities for each of the measurement blocks.

15. The method of claim 14, wherein pixel value probabilities are computed for a given measurement block based upon a weighted average of gray value measurements over the given measurement block.

16. The method of claim 15, wherein the weighted average of gray values is computed by fitting a mask to the dot locations over the given measurement block.

17. The method of claim 16, wherein the mask has a truncated Gaussian profile.

18. The method of claim 15, further comprising estimating parameters of probability distributions fit to a histogram of the weighted average of gray value measurements.

19. The method of claim 18, wherein the probability distributions are asymmetric Laplacian distributions.

20. A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:

apply an invertible graphical operation between regions of a graphical bar code and corresponding regions of a base image to produce a set of measurement blocks; and

select from a predefined template set information-encoding graphical templates corresponding to the set of measurement blocks with the highest estimated probability.